

**UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF FLORIDA**

Case No. 23-cv-20127-BLOOM/Otazo-Reyes

AR DESIGN INNOVATIONS LLC,

Plaintiff,

v.

CITY FURNITURE, INC.,

Defendant.

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OMNIBUS ORDER ON MOTION TO STRIKE AND MOTION TO DISMISS

THIS CAUSE is before the Court on Defendant City Furniture, Inc.’s Motion to Dismiss, ECF No. [29] (“Motion to Dismiss”), and Motion to Strike Expert Declaration of David Kaeli, ECF No. [38] (“Motion to Strike”). Plaintiff AR Design Innovations, LLC (“Plaintiff”) filed a Response to the Motion to Dismiss, ECF No. [34], to which Defendant filed a Reply, ECF No. [37]. Plaintiff also filed a Response to the Motion to Strike, ECF No. [41], to which Defendant filed a Reply, ECF No. [42].

The Court has reviewed the Motions, the Responses, the Replies, the record in this case, the applicable law, and is otherwise fully advised. For the reasons that follow, the Motion to Strike is granted, and the Motion to Dismiss is denied.

I. BACKGROUND

This is an action for alleged patent infringement. Plaintiff filed its Complaint against Defendant on January 11, 2023, ECF No. [1], and alleges that the United States Patent and Trademark Office issued U.S. Patent No. 7,277,572 (“’572 Patent” or “Patent”) on October 2, 2003. ECF No. [1] ¶ 35. Plaintiff attaches a copy of U.S. Patent No. 7,277,572 to the Complaint.

See ECF No. [1-2]. Plaintiff owns all substantial rights, interest, and title in and to the '572 Patent. ECF No. [1] ¶ 39. Defendant has infringed the '572 Patent by “making, having made, using, importing, providing, supplying, distributing, selling, or offering” the Accused Instrumentalities to Defendant’s customers. *Id.* ¶ 41. Specifically, the Accused Instrumentalities, including its “Augmented Reality” tool, perform and supply a method in a client-server computing environment for generating and rendering a photorealistic three-dimensional (“3D”) perspective view of a 3D object selectively positioned within a 3D scene on its website, www.cityfurniture.com, which infringes Claim 1 of the '572 Patent because the method includes the steps disclosed in that claim. *Id.* ¶¶ 29, 30, 43, 45.

The Court has reviewed the '572 Patent attached to the Complaint and, as explained in the Legal Standard section below, accepts the representations in the Patent as true and evaluates all plausible inferences derived from those representations in favor of Plaintiff. *See Hoefling v. City of Miami*, 811 F.3d 1271, 1277 (11th Cir. 2016) (“A district court can generally consider exhibits attached to a complaint in ruling on a motion to dismiss”); *see also Aatrix Software, Inc. v. Green Shades Software, Inc.*, 890 F.3d at 1354, 1357 (Fed. Cir. 2018) (en banc) (per curiam) (“If patent eligibility is challenged in a motion to dismiss for failure to state a claim pursuant to Rule 12(b)(6), we must apply the well-settled Rule 12(b)(6) standard which is consistently applied in every area of law.”). The '572 Patent is titled THREE-DIMENSIONAL INTERIOR DESIGN SYSTEM and discloses “[a] system and method in a client-server computing environment . . . for generating and rendering a photorealistic three-dimensional (3D) perspective view of a 3D object selectively positioned within a 3D scene.” '572 Patent, at [54], [57]. The invention disclosed in the '572 Patent particularly relates to a software application that is “configured to reside on a client computer.” *Id.* col. 1 ll. 6-13.

The following representations are made in the specification of the '572 Patent. “Many systems have been devised to provide various design and modeling functionality.” *Id.* col. 1 ll. 21-22. For example, U.S. Patent Number 5,255,352 “concerns a system and method for providing surface detail to three-dimensional surfaces which preserves the specific dimensional integrity of the surface detail image being mapped in order to provide dimensionally correct surface detail.” *Id.* col. 1 ll. 26-29. U.S. Patent Number 5,940,806 “concerns an apparatus and method employing a programmable computer for providing a list of data items corresponding to geometrically describable materials based upon a profile specified by a user.” *Id.* col. 1 ll. 35-42. Additionally, U.S. Patent Number 6,005,969 concerns methods and systems for the manipulation of images of floor coverings or other fabrics “that enable a fabric or textile sampling and design process.” *Id.* col. 1 ll. 53-57.

“At least one previous upholstered furniture customization system,” a system belonging to La-Z-Boy, “permits prospective customers to preview La-Z-BoyTM furniture upholstered in La-Z-BoyTM offered fabrics.” *Id.* col. 2 ll. 6-17. However, this system is not capable of rendering furniture images in 3D in a background scene such as a room or of enabling a customer to manipulate the furniture images. *Id.* col. 2 ll. 18-22. Other systems, such as cMyvisionTM and VisualPhileTM, provide “photorealistic visualizations of home remodeling as opposed to decorating projects.” *Id.* col. 2 ll. 44-47. However, those two systems have inherent limitations, including that they are not “based upon 3D coordinates, so furniture images have to be placed and scaled visually by the user, and the furniture objects are 2D [two dimensional] images, so they cannot be rotated to match the angle of the room photograph.” *Id.* col. 2 ll. 53-58.

In addition to the furniture customization systems, there are also several stand-alone commercially available software programs that support interior design, but those are subject to a

number of drawbacks.¹ *Id.* col. 2 l. 65 – col. 3 l. 57. Another system, disclosed in U.S. patent application serial number 2002/0093538, purports to address those drawbacks. That system is a software-based system for interactively producing and rendering “photorealistic composite images” across a digital communications network that is based on goods selected by a user *in situ* with an environment that is also selected or specified on a user’s client computer. *Id.* col. 3 l. 61 – col. 4 l. 6. In particular, the invention disclosed in U.S. patent application number 2002/009358 uses the computational resources of a user’s client computer to “‘frame’ [a] scene, and the greater computational resources of a server and allied computers to render 3D objects in a 3D scene to form a ‘photorealistic composite.’” *Id.* col. 4 ll. 1-6. However, that system has its own drawbacks. There is a time lag associated with uploading the “‘frame’ of [a] scene,” which stems from waiting for the server to render a 3D composite and download a relatively large file or array of files. *Id.* col. 4 ll. 7-17. In addition, further changes to the composite images require a user to edit the “frame”—which “presumably cannot be effected at the client computer”—requiring further communication between the client computer and server, resulting in further delays. *Id.* Thus, there exists a need for “an improved 3D design and visualization system that includes an easy to use Graphical User Interface (GUI), [that] is capable of enabling a user to quickly and conveniently generate or import 3D scenes, import and manipulate 3D objects in the scenes in real time, and which is capable of rendering them in photorealistic detail on the client computer.” *Id.* col. 4 ll. 18-24.

¹ For example, one system, Custom Home 3-D Design and Décor™, allows users to import photographs of actual rooms into the program and to place furniture objects in the room images; however, that system is incapable of “rendering furniture objects placed onto floor plans in photographically-derived scenes.” *Id.* col. 3 ll. 12-29.

The invention disclosed by the '572 Patent includes "a method in a client-server computing environment for generating and rendering a photorealistic three-dimensional . . . perspective view of a 3D object selectively positioned within a 3D scene." *Id.* col. 4 ll. 28-32. The method includes

transmitting selected ones of plurality of 3D objects from the server library to a client library; automatically updating the plurality of 3D objects in the server library, . . . and automatically transmitting updates for the selected ones of 3D objects in the server library, to the client; so that a user may manipulate the selected 3D objects with the client application to generate a 3D scene at the client.

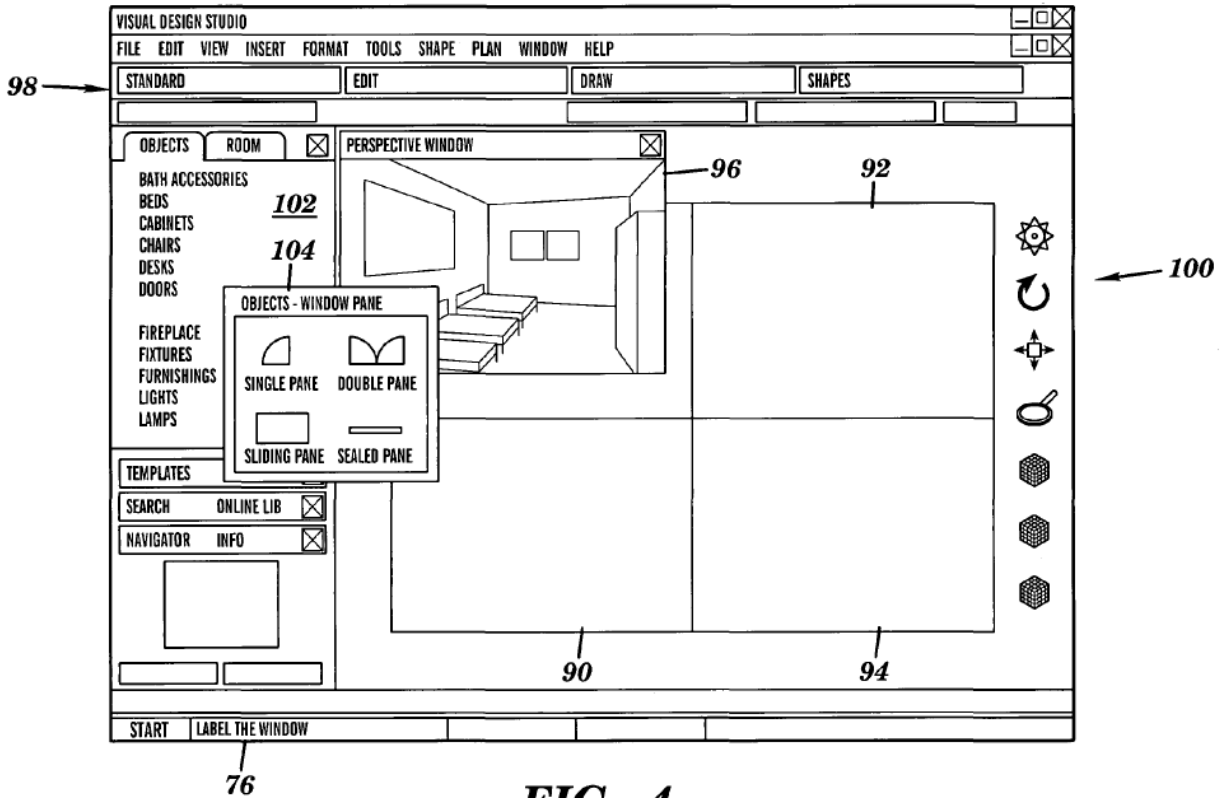
Id. col. 4 l. 62 – col. 5 l. 3. There are several embodiments of the invention disclosed in the '572 Patent. Embodiments of the invention may be used by interior design professionals. *Id.* col. 8 ll. 4-6. "By manipulating images of actual rooms with the client application of the [] invention, designers may be able to simply and quickly produce photorealistic images of their vision. Features including lighting effects and highly detailed models of furnishings permit the rendered, composite images to appear photorealistic." *Id.* col. 8 ll. 16-21.

Claim 1 of the '572 Patent, recites the following:

1. A method in a client-server computing environment for generating and rendering a photorealistic three-dimensional (3D) perspective view of a 3D object selectively positioned within a 3D scene, the method comprising:

- (a) communicably accessing a server with a client;
- (b) operating with the client, a client application configured for scene editing and rendering, including a graphical user interface (GUI);
- (c) displaying a 3D scene with the GUI;
- (d) configuring the 3D scene for being selectively displayed in a plurality of views;
- (e) retrieving at least one 3D object from the server;
- (f) importing the 3D object into the 3D scene to generate a composite;
- (g) manipulating the 3D object within the composite for placement and orientation;
- (h) rendering a 3D image of the composite at the client;
- (i) selectively reconfiguring the 3D image in real time;
- (j) applying luminosity characteristics to the 3D image; and
- (k) rendering, with the client application, a photorealistic 3D view of the composite image, including the luminosity characteristics.

Id. col. 36 ll. 20-42. A representative screen display generated by the embodiment of the '572 Patent shown in Figures 1-3 of the Patent is reproduced below.

**FIG. 4**

Id. fig.4.

On March 24, 2023, Defendant filed the Motion to Dismiss, arguing that the '572 Patent is not eligible for patent protection because it is directed to an unpatentable abstract idea. *See generally* ECF No. [29]. Plaintiff filed its Response, ECF No. [34], relying extensively on an attached Declaration of David Kaeli ("Kaeli Declaration") stating that the '572 Patent is directed to improvements over the prior art to computer operations, *see generally* ECF No. [34-1]. On April 24, 2023, Defendant filed the Motion to Strike, contending that the Kaeli Declaration is extrinsic material that is inappropriate for the Court to consider on a motion to dismiss. *See generally* ECF No. [38].

II. LEGAL STANDARD

A pleading must contain "a short and plain statement of the claim showing that the pleader is entitled to relief." Fed. R. Civ. P. 8(a)(2). Although a complaint "does not need detailed factual

allegations,” it must provide “more than labels and conclusions, and a formulaic recitation of the elements of a cause of action will not do.” *Bell Atl. Corp. v. Twombly*, 550 U.S. 544, 555 (2007); *see Ashcroft v. Iqbal*, 556 U.S. 662, 678 (2009) (explaining that Rule 8(a)(2)’s pleading standard “demands more than an unadorned, the-defendant-unlawfully-harmed-me accusation”). Additionally, a complaint may not rest on “‘naked assertion[s]’ devoid of ‘further factual enhancement.’” *Iqbal*, 556 U.S. at 678 (quoting *Twombly*, 550 U.S. at 557). “Factual allegations must be enough to raise a right to relief above the speculative level.” *Twombly*, 550 U.S. at 555. If the allegations satisfy the elements of the claims asserted, a defendant’s motion to dismiss must be denied. *See id.* at 556.

When reviewing a motion to dismiss, a court, as a general rule, must accept the plaintiff’s allegations as true and evaluate all plausible inferences derived from those facts in favor of the plaintiff. *See Chaparro v. Carnival Corp.*, 693 F.3d 1333, 1337 (11th Cir. 2012); *Miccosukee Tribe of Indians of Fla. v. S. Everglades Restoration Alliance*, 304 F.3d 1076, 1084 (11th Cir. 2002); *AXA Equitable Life Ins. Co. v. Infinity Fin. Grp., LLC*, 608 F. Supp. 2d 1349, 1353 (S.D. Fla. 2009) (“On a motion to dismiss, the complaint is construed in the light most favorable to the non-moving party, and all facts alleged by the non-moving party are accepted as true.”); *Iqbal*, 556 U.S. at 678.

While the Court’s review is generally confined to the four corners of a complaint, when “the plaintiff refers to certain documents in the complaint and those documents are central to the plaintiff’s claim, then the Court may consider the documents . . . for purposes of Rule 12(b)(6) dismissal.” *Brooks v. Blue Cross & Blue Shield of Fla., Inc.*, 116 F.3d 1364, 1369 (11th Cir. 1997). Moreover, in a patent infringement dispute, the well-settled Rule 12(b)(6) standard applies. *Aatrix Software, Inc. v. Green Shades Software, Inc.*, 890 F.3d at 1357. Dismissal is appropriate where “the *only* plausible reading of the patent [is] that there is clear and convincing evidence of

ineligibility.” See *UbiComm, LLC v. Zappos IP, Inc.*, 2013 WL 6019203, at *6 (D. Del. Nov. 13, 2013) (quoting *Ultramercial, Inc. v. Hulu, LLC*, 722 F.3d 1335, 1338-9 (Fed. Cir. 2013)) (internal quotation marks omitted and emphasis in original).

III. DISCUSSION

The Court first addresses Defendant’s Motion to Strike the Kaeli Declaration, which directly addresses whether the ’572 Patent is directed to patent ineligible subject matter. The Court then proceeds to consider the Motion to Dismiss.

A. Motion to Strike

Defendant argues the Court should strike the Kaeli Declaration because it was not attached to the Complaint and there are no other bases justifying its consideration. ECF No. [38] at 6. Defendant contends that the Motion to Dismiss is limited to the Complaint and “the intrinsic record of the asserted patent,” and includes no attached documents or other extraneous material. *Id.* Accordingly, Defendant points out that it has properly filed the Motion to Dismiss pursuant to Rule 12 of the Federal Rules of Civil Procedure and the Motion to Dismiss should not be converted to a Rule 56 motion for summary judgment. *Id.* Defendant invokes the well-established principle in the Eleventh Circuit that material outside of the pleadings should not be considered in the context of a Rule 12 motion to dismiss. *Id.* at 7.

Plaintiff responds that the Motion to Dismiss is premature because the lack of evidence at this stage in the litigation precludes a finding on the patentability of the ’572 Patent, but requests that the Court convert the Motion to Dismiss into a motion for summary judgment and consider the Kaeli Declaration because it demonstrates that Defendant is unable to show the ’572 Patent is invalid under 35 U.S.C. § 101. ECF No. [41] at 3. Alternatively, if the Court agrees that the Motion

to Dismiss should be denied without considering the Kaeli Declaration, it need not strike the Declaration or convert the Motion to Dismiss to one for summary judgment. *Id.* at 4.

Defendant replies that a conversion of the Motion to Dismiss into a motion for summary judgment is unnecessary given that Defendant has limited the Motion to Dismiss to the pleadings and the Patent that is attached to the Complaint, and that such a conversion would be unfairly and unduly prejudicial given that Defendant has not had a chance to respond or to seek discovery concerning the Kaeli Declaration. ECF No. [42] at 3-4.

The Eleventh Circuit has explained that “the analysis of a 12(b)(6) motion is limited primarily to the face of the complaint and attachments thereto.” *Brooks*, 116 F.3d at 1368 (citation omitted). However, where a plaintiff refers to documents in a complaint and those documents are “central to the plaintiff’s claim,” the Court may consider those documents without converting the motion into a motion for summary judgment. *Id.*

The Complaint alleges infringement of the ’572 Patent and a copy of the Patent is attached to the Complaint. *See* ECF No. [1-2]. As such, there is no dispute that the Court may consider the Patent in ruling on the Motion to Dismiss without converting the motion. In addition, the parties agree the Court must convert the Motion to Dismiss into one for summary judgment if the Court were to consider the Kaeli Declaration. However, it is inappropriate to entertain Plaintiff’s request to convert the motion where that request is raised in a response to that motion. *Posner v. Essex Ins. Co.*, 178 F.3d 1209, 1222 (11th Cir. 1999) (citing Fed. R. Civ. P. 7(b) (“application to the court for an order shall be by motion which . . . shall be made in writing, shall state with particularity the grounds therefor, and shall set forth the relief or order sought.”)).

Thus, the question is whether the Court should consider the Motion to Dismiss by reviewing the Complaint and the Patent without the benefit of the Kaeli Declaration. The Court

may do so. Contrary to Plaintiff's contention, the Court may properly address the issue of patent ineligibility at this early stage in the litigation because patent eligibility is a question of law. *Prisua Eng'g Corp. v. Samsung Elecs. Co.*, No. 1:16-CV-21761-KMM, 2017 WL 1041571, at *3 (S.D. Fla. Mar. 9, 2017); *see also Genetic Techs. Ltd. v. Merial L.L.C.*, 818 F.3d 1369, 1373 (Fed. Cir. 2016) ("Patent eligibility under 35 U.S.C. § 101 is a question of law that we review de novo."). Plaintiff cites to cases in which courts have denied motions to dismiss that raise arguments under 35 U.S.C. § 101, ECF No. [41] at 3-4, but the Court disagrees that these cases counsel deferring ruling on a question of law. The courts in those cases concluded that claim construction was required to determine whether the patents at issue were patent eligible under 35 U.S.C. § 101, not that courts cannot adjudicate a motion to dismiss on those grounds. *See, e.g., PayRange, Inc. v. Kiosoft Techs., LLC*, No. 20-24342-CIV, 2021 WL 5374724, at *2 (S.D. Fla. Nov. 18, 2021) (finding that it was premature to engage in analysis on whether patent contained the requisite "inventive concept" without claim construction); *StoneEagle Servs., Inc. v. Pay-Plus Sols., Inc.*, No. 8:13-CV-2240-T-33MAP, 2015 WL 518852, at *4 (M.D. Fla. Feb. 9, 2015) (same); *see also IMX, Inc. v. E-Loan, Inc.*, No. 09-20965-CIV, 2010 WL 11506065, at *1 (S.D. Fla. Mar. 3, 2010) (denying motion to dismiss because it was premature to consider whether the plaintiff's infringement claims met the patentability requirements of 35 U.S.C. § 101 without the benefit of claim construction). Here, for the reasons discussed below, claim construction is unnecessary to determine whether the '572 Patent is directed to an abstract concept, so it need not engage in an analysis of whether the '572 Patent contains an "inventive concept," a question for which claim construction may be necessary to answer. In any event, the Federal Circuit has made clear that patent eligibility can be resolved on a motion to dismiss, *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1368 (Fed. Cir. 2018), and that the standard for all 12(b)(6) motions applies to motions to dismiss

for failure to state a claim on the grounds of patent ineligibility, *Aatrix Software, Inc. v. Green Shades Software, Inc.*, 890 F.3d at 1357.

Given the Federal Circuit's guidance, it is unnecessary to analyze the Kaeli Declaration when the Court can review the Patent for subject matter eligibility in the first instance under the Rule 12(b)(6) standard. As such, the Court does not consider the Declaration and grants the Motion to Strike.

B. Motion to Dismiss

Defendant contends Plaintiff's Complaint should be dismissed because the claims of the '572 Patent are invalid under 35 U.S.C. § 101. ECF No. [29] at 1. Defendant's main argument is that the '572 Patent fails the two-step test for determining whether a patent is directed to abstract ideas set forth in the Supreme Court's decision in *Alice Corporation PTY. LTD. v. CLS Bank International*, 573 U.S. 208 (2014) ("*Alice*"), specifically reasoning that Claim 1 of the '572 Patent, which Plaintiff asserts is representative of the Patent's claims, (1) is directed to the abstract idea of "visualizing and modifying a scene," ECF No. [29] at 17-18, and (2) contains no inventive concept that transforms the claimed abstract idea into a patent eligible application, *id.* at 24-26. Plaintiff responds that (1) the '572 Patent is eligible for patent protection under *Alice* because it is directed to an improvement in computerized 3D modeling methods in a client-server environment and its dependent claims further "divorce[]" the Patent invention from an abstract idea, and that (2) the Patent recites unconventional elements that together provide an "inventive concept." ECF No. [34] at 9-20.

Defendant further argues that because the Patent fails to disclose how to achieve improvements in the functioning of computer hardware from a technical standpoint, the Patent

potentially preempts all methods of 3D computer modeling. ECF No. [29] at 22. Plaintiff does not substantively respond to that argument. *See* ECF No. [34].

The Court addresses the parties' arguments in turn.

1. Alice's Two Steps

Section 101 of the Patent Act provides that "[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title." 35 U.S.C. § 101. The Supreme Court has interpreted that provision to implicitly exclude "[l]aws of nature, natural phenomena, and abstract ideas[.]" *Alice*, 573 U.S. at 216 (citation omitted).

Alice established a two-part test for courts to determine whether a patent claim is patent ineligible. *Prisua*, 2017 WL 1041571, at *3. First, a court must determine whether a patent claim is a claim to a law of nature, a natural phenomenon, or an abstract idea. *Alice*, 573 U.S. at 217-18. As the Federal Circuit has observed, the Supreme Court has not set forth how courts may determine what constitutes an "abstract idea." *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1334 (Fed. Cir. 2016). However, the Supreme Court has cautioned that courts must apply the patentability exception cautiously as "too broad an interpretation of this exclusionary principle could eviscerate patent law." *CareDx, Inc. v. Natera, Inc.*, 40 F.4th 1371, 1376 (Fed. Cir. 2022) (quoting *Mayo Collaborative Servs. v. Prometheus Lab'ys, Inc.*, 566 U.S. 66, 70 (2012)). The Federal Circuit has explained that courts have made this determination by "asking what the patent asserts to be the focus of the claimed advance over the prior art" considering the patent's specification. *TecSec, Inc. v. Adobe Inc.*, 978 F.3d 1278, 1292-93 (Fed. Cir. 2020). In cases involving a patent relating to a software application, "the inquiry often turns on whether the claims focus on specific asserted

improvements in computer capabilities or instead on a process or system that qualifies as an abstract idea for which computers are invoked merely as a tool.” *Nantworks*, 2023 WL 187490, at *4 (citing *TecSec*, 978 F.3d at 1293). *Nantworks* explained that a process is an abstract idea if it can be performed in several ways, including “mentally, or by putting pen to paper.” *Id.* at *4 (citing *Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1147 (Fed Cir. 2016)). In contrast, a patent claim to a “specific technical solution” is patentable. *Id.* (citing *Data Engine Techs. LLC v. Google LLC*, 906 F.3d 999, 1002, 1007-08 (Fed. Cir. 2018)).

If a patent claim is directed to an abstract idea, a court must next determine—at *Alice* Step 2—whether the patent claim includes an “inventive concept”: “an element or combination of elements that is ‘sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself.’” *Id.* (citation omitted). *NantWorks, LLC v. Niantic, Inc.*, 2023 WL 187490, at *4.

a. Alice Step 1

According to Defendant, the ’572 Patent claims are invalid because the claims are not directed to subject matter that is eligible for patent protection but rather to unpatentable “abstract ideas.” *Id.* (citing *Diamond v. Chakrabarty*, 447 U.S. 303, 308 (1980)). Relying on *Barbaro Technologies v. Niantic, Inc.*, 475 F. Supp. 3d 1007 (N.D. Cal. 2020), Defendant submits the ’572 Patent is like the patent in *Barbaro* that was found ineligible for patent protection because the patent was directed to “integrating the real and virtual worlds—rather than at any particular method of achieving [the integration].” *Id.* (quoting *Barbaro*, 475 F. Supp. 3d at 1012). Further, Defendant contends the ’572 Patent incorporates the same abstract steps of collecting, analyzing, and displaying information that are described in the patent that was at issue in *Nantworks, LLC v. Niantic, Inc.*, No. 20-cv-06262-LB, 2023 WL 187490 (N.D. Cal. Jan. 13, 2023). *Id.* Moreover,

Defendant asserts that the specification's disclosure of the use of generic components—such as a computer, client application, GUI, rendering engines, and a server that are used for “their conventional purpose[s]” does not alter the conclusion that Claim 1 is directed to an abstract idea. *Id.* at 21.

Defendant recognizes that another court found that the '572 Patent was not directed to an abstract idea but rather to improvements to (1) the manipulability and appearance of 3D scenes and objects and (2) the speed with which such scenes and objects may be rendered and edited. *Id.* at 22-23 (citing *Design Innovations LLC v. Ashley Furniture Indus., Inc.*, 4:20-CV-392-SDJ, 2021 WL 1213551 (E.D. Tex. Mar. 30, 2021) (“*Ashley Furniture*”). Defendant thus argues that the '572 Patent does not include limitations regarding “speed” or “usability.” *Id.* at 23. In addition, Defendant asserts that improvements in download and upload speeds are not a specific improvement in computer technology that would be patentable. *Id.* (citing *TS Patents LLC v. Yahoo! Inc.*, 279 F. Supp. 3d 968 (N.D. Cal. 2017) and *Nantworks*, 2021 WL 24850, at *7).

Plaintiff responds that Defendant grossly oversimplifies the '572 Patent. Plaintiff directs the Court to elements of Claim 1, which recite “methods for manipulating 3D objects at a client application, applying luminosity characteristics to the 3D image or object, and rendering at the client level, a photorealistic 3D view of the images or objects including the luminosity characteristics,” which Plaintiff asserts are methods that improve upon the prior art. ECF No. [34] at 7. Plaintiff notes that the Court may look to the specification “to shed light on what “the problem facing the inventor” was and what the patent describes as the “invention.”” *Id.* at 13 (citing, *inter alia*, *ChargePoint, Inc. v. SemaConnect, Inc.*, 920 F.3d 759, 767 (Fed. Cir. 2019)).

Plaintiff asserts that *Ashley Furniture* correctly determined that the '572 Patent is directed to patent-eligible subject matter. *Id.* at 14. The '572 Patent's dependent claims further support

patent eligibility because those claims recite “additional steps” that are not solely encompassed by an abstract idea. *Id.*

In *Ashley Furniture*, the court found the ’572 Patent was not directed to an abstract idea but rather to “improvements to the manipulability and appearance of 3D scenes and objects, including luminosity characteristics, and the speed with which such scenes and objects may be rendered and edited.” *Ashley Furniture*, 2021 WL 1213551, at *7. In particular, *Ashley Furniture* stated that Plaintiff alleged its claims are “directed to a software application that sets 3D objects in 3D scenes and that its claims improve upon [the software application] by allowing for the application of luminosity characteristics to the scene and the real-time manipulation of 3D objects on client devices via an easy-to-use [GUI].” *Id.* Accepting those allegations as true, *Ashley Furniture* concluded that the ’572 Patent makes digital 3D modelling faster and easier. *Id.* The Court agrees with that conclusion and describes the ’572 Patent below in some detail to explain why.

The specification of the ’572 Patent focuses on a drawback in three-dimensional modeling systems. The prior art includes U.S. Patent application serial number 2002/0093538, which discloses a software-based system that displays photorealistic consumer goods as 3D objects *in situ* with an environment, both of which are selected by a system user. *Id.* col. 3 l. 66 – col. 4 l. 1. As a result, the system purportedly uses the computational resources of the user’s client computer to “frame” the scene and the greater computational resources of a server or “allied computers” to render “3D objects in a 3D scene to form a ‘photorealistic composite.’” *Id.* col. 3 l. 66 – col. 3 l. 6. However, the system disclosed in U.S. Patent application serial number 2002/0093538 has drawbacks, including that there is “lag time” in generating a photorealistic composite due to the time it takes to upload and download the “frame” of the scene and “a relatively large file or array

of files,” respectively. *Id.* col. 4 ll. 7-17. In addition, if the user were to make changes after a composite image is rendered, such as by moving 3D objects within a scene, there is further lag time in rendering a new photorealistic composite. *Id.* As such, the ’572 Patent identifies a purported need for a system that allows a user to select a photorealistic composite and make changes to that composite with less or no lag time. *Id.* col. 4 ll. 18-24.

Accepting Plaintiff’s allegations as true and evaluating all plausible inferences derived from those facts in favor of Plaintiff, the specification of the ’572 Patent discloses a solution to the lag problems in the prior state of the art of 3D modelling. In particular, the ’572 Patent specification discloses a method that includes transmitting “selected ones of plurality of 3D objects from the server library to a client library . . . so that a user may manipulate the selected 3D objects with the client application to generate a 3D scene *at the client*.” *Id.* col. 4 l. 62 – col. 5 l. 3 (emphasis added).² Further, the specification describes a client application configured for scene editing to render “a photorealistic 3D view of the composite image, including the luminosity characteristics.” *Id.* col. 4 ll. 43-46. As a result, users such as designers “may be able to simply and quickly produce realistic images of their vision.” *Id.* col. 8 ll. 16-21. The ’572 Patent solves a need for editing photorealistic scenes quickly and easily by using a system that includes a software application with a GUI that allows a user to quickly manipulate a scene at the client without needing to wait for computations at a server.

As illuminated by the Patent specification, Claim 1 is thus directed to “simply and quickly produc[ing] realistic images.” Claim 1 claims “[a] method in a client-server computing environment for generating and rendering a photorealistic three-dimensional . . . perspective view

² Because the Court concludes the specific improvement of the ’572 Patent eliminates the need for client-server communication to modify a composite image, Defendant’s argument based on its contention that ’572 Patent does not improve download and upload speeds, even if true, is misplaced.

of a 3D object selectively positioned within a 3D scene” with limitations that include “operating with the client, a client application configured for scene editing and rendering, including a [GUI]” that renders a 3D image of a composite scene *at the client* to selectively reconfigure the 3D image in real time. *Id.* col. 35 ll. 20-42. Thus, as *Ashley Furniture* puts it, the ’572 Patent claims a method that makes digital 3D modelling faster and easier than previously possible with the prior art. *Ashley Furniture*, at *7. As such, the ’572 Patent is not directed to an abstract idea but to a specific improvement to the functioning of a computer, which is patent-eligible subject matter. *See, e.g., Data Engine Techs. LLC v. Google LLC*, 906 F.3d 999, 1011 (Fed. Cir. 2018) (holding that patent claim that recites a method that differs from prior art navigation methods and “provide[s] for rapidly accessing and processing information” in three-dimensional spreadsheets by allowing a user “to simply and conveniently ‘flip through’ several pages of the notebook to rapidly locate information of interest” instead of “finding information by scrolling different parts of a large spreadsheet” was patent eligible).

The cases on which Defendant relies to support its contention that the ’572 Patent is directed to an abstract idea are inapposite because the courts in those cases found the disputed patents did not claim a specific technical improvement. In *Barbaro*, the court considered a patent that claims a computer system for providing a “three-dimensional virtual thematic environment” (VTE) into which information can be downloaded from the internet. *Barbaro*, 475 F. Supp. 3d at 1010.³ The court determined the patent was directed to the abstract idea of integrating real-world

³ The *Barbaro Technologies* court described Claim 1 of the at-issue patent as follows: Claim 1 recites, in relevant part, a “computer system for providing a [VTE]” which “retriev[es] information . . . from external sources over the internet,” including user location, “integrat[es] said information into the [3D VTE],” and allows the user to “interact[] with the [3D VTE] as a simulated real-world interaction, depending on the user’s geographical three dimensional movement through [3D VTE].” *Barbaro Techs.*, 475 F. Supp. 3d at 1010.

information into a virtual environment but failed to claim a specific technical improvement. In particular, the court in *Barbaro* explained that the patent claimed a “computer system” with standard components, such as a memory and a processor, but failed to claim any tasks to accomplish improved virtual-real world integration, or to recite anything that is unique about the computer system’s memory. *Id.* at 1012. In addition, the specification of the patent provided no further details on how the invention improved real-world-virtual world integration. *Id.* The specification noted that the invention can be implemented in *a number of ways*, supporting that the patent invoked computer technology merely as a tool. *Id.*

By contrast, the ’572 Patent claims a specific technical improvement by reciting tasks to reconfigure a photorealistic 3D perspective view of a 3D object in a scene in real time. ’572 Patent col. 36 ll. 19-42. In addition, the Patent’s specification further illuminates those tasks by describing how the manipulation of a 3D object in a photorealistic composite is accomplished with an application entirely at a client that operates in a client-server computing environment, thereby enabling selective reconfiguration of that object in real time. *Id.* col. 4 ll. 28-46. Specifically, the specification contains detailed descriptions of the functioning of the client-server computing environment, including a detailed description of the GUI, ’572 Patent col. 11 l. 43 – col. 35 l. 2.

Nantworks does not support Defendant’s argument either. The court in *Nantworks* found the improvement described in the specification was not evident in the claims. *NantWorks*, 2023 WL 187490, at *6.⁴ Claim 1 of the patent at issue in the case recites the following:

1. A device capable of rendering [AR], the device comprising:
at least one sensor, including a location sensor;
a display;
a non-transitory computer readable memory storing software instructions; and

⁴ In addition, the court noted that even if it assumed the specification was tied to the claims, the specification did not disclose an improvement in the functioning of AR technology but rather used that technology to implement generic concepts. *NantWorks*, 2023 WL 187490, at *6.

at least one processor coupled with the non-transitory computer readable memory, the at least one sensor, and the display; and, upon execution of the software instructions, is configurable to:

obtain sensor data from the at least one sensor wherein the sensor data includes a device location obtained from the location sensor;

obtain an area of interest via an area database based on at least the device location within the sensor data;

access an area tile map of the area of interest, the area tile map represented by a set of tile subareas that includes one or more tessellated tiles from a tessellated tile map;

identify a tile subarea from the set of tile subareas based at least in part on the device location relative to one or more locations of tile subareas from the set of tile subareas, wherein the identified tile subarea covers at least a portion of the area of interest, and wherein one or more tessellated tiles within the identified tile subarea are associated with one or more AR content objects;

populate the non-transitory computer readable memory with at least one of the one or more AR content objects associated with the one or more tessellated tiles corresponding with the identified tile subarea; and

render the at least one of the one or more AR content objects that is associated with the identified tile subarea on the display based on a view of interest.

NantWorks, 2023 WL 187490, at *1-2. The court in *Nantworks* found that claim 1 of the at-issue patent and other claims do not focus on specific improvements in computer technology but are instead directed to the abstract idea of providing information based on a location on a map. As *Nantworks* explained, “[a] patent-eligible technical improvement requires solving an actual [technical] problem.” *Id.* at *7. Here, the Court at this stage accepts as true that the ’572 Patent solves a problem in 3D modeling systems by minimizing or eliminating lag time in modifying a photorealistic composite image.⁵

The Court finds Defendant’s other arguments on *Alice* Step 1 unpersuasive. It is immaterial that the ’572 Patent recites generic components, or that the patent does not improve upon those

⁵ Likewise, *IBM* is unavailing. There, the Federal Circuit explained that the mere automation of manual processes using generic computers does not constitute a patentable improvement in computer technology. *IBM*, 50 F.4th at 1377-78 (emphasis added). As stated, the Patent purports to improve the speed at which a computer can render a 3D model, not to claim the process of rendering a 3D model itself.

components from a technical standpoint,. That is because the Patent is directed not to improving any component recited in the claims but to improving the ability to generate and render composite images in a client-server computing environment. *See Trading Techs. Int'l, Inc. v. CQG, Inc.*, 675 F. App'x 1001, 1004 (Fed. Cir. 2017) (claims patent eligible where they required a specific, structured GUI paired with “a prescribed functionality directly related to the [GUI’s] structure that is addressed to and resolved a specifically identified problem in the prior state of the art”).⁶

b. Alice Step 2

Defendant also argues that, at *Alice* Step 2, the '572 Patent contains no inventive concept sufficient to transform the abstract idea to which the patent is directed into patent-eligible matter. *Id.* at 24-26. As such, there are no claim construction or factual issues that preclude granting the Motion. *Id.* at 26-27. Plaintiff responds that—even if the Court were to determine that the '572 Patent is directed to an abstract concept—the patent discloses an “inventive concept” by describing the use of generic components in an unconventional distributed fashion to solve a particular technological problem. ECF No. [34] at 15-20.

Because the Court concludes Claim 1 of the '572 patent is not abstract under *Alice* Step 1, it need not reach *Alice* Step 2 with respect to that claim, or any other claims since Defendant asserts Claim 1 is representative of the other Patent claims. *See Core Wireless Licensing S.A.R.L. v. LG Elecs., Inc.*, 880 F.3d 1356, 1363 (Fed. Cir. 2018).

⁶ Defendant attempts to distinguish *Trading Technologies* on the grounds that GUIs are no longer an idea that has not long existed. ECF No. [37] at 9. However, *Trading Technologies* was clear that the holding in that case was premised on the specific structure of the GUI in the two patents at issue in that case and was not holding as to GUIs generally. *Trading Techs.*, 675 Fed. App'x at 1004 (“The claims require a **specific, structured** graphical user interface paired with a prescribed functionality directly related to the graphical user interface’s structure that is addressed to and resolves a specifically identified problem in the prior state of the art.”) (emphasis added).

2. *Preemption*

Defendant argues that the '572 Patent does not improve the functioning of any computer hardware from “a technical standpoint,” *id.* at 21-22, raising the risk that the Patent would preempt all methods of 3D modeling if found to be subject matter eligible. *Id.* at 22. Plaintiff disputes that the asserted claims preempt all methods of 3D modeling and contends there are factual disputes that preclude granting the Motion. ECF No. [34] at 20.

Defendant's concern is unfounded. As the Court has explained, the Patent refers to the prior art it disclaims and is directed to a narrow improvement in the functioning of 3D modeling technology. Moreover, *Loyalty Conversion*, another case on which Defendant relies, does not support Defendant's preemption argument. There, the court found the patent at issue failed to disclose the precise method in which the computer performed the functions described in that patent, namely converting “loyalty awards of one entity into those of another.” *Loyalty Conversion Sys. Corp. v. Am. Airlines, Inc.*, 66 F. Supp. 3d 829, 843 (E.D. Tex. 2014). Here, in contrast, Claim 1 specifically recites a method for improving functionality.

Accordingly, it is **ORDERED AND ADJUDGED** as follows.

1. The Motion to Strike, **ECF No. [38]**, is **GRANTED**.
2. The Motion to Dismiss, **ECF No. [29]**, is **DENIED**.
3. Defendants shall file an Answer to the Complaint by **June 20, 2023**.

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DONE AND ORDERED in Chambers at Miami, Florida, on June 5, 2023.

A handwritten signature in black ink, appearing to be 'JB' or similar, with a long horizontal stroke extending to the right.

BETH BLOOM
UNITED STATES DISTRICT JUDGE

Copies to:

Counsel of Record